Model Course 1.XX

SHIP SECURITY OFFICER

DRAFT 29 May 2003

(This draft model course is under review by an IMO Validation Panel until 31 July 2003. It will be finalized by the course developers and submitted to the Secretariat in camera-ready format by 8 September 2003.)

IMO

ACKNOWLEDGEMENTS

This course for Ship Security Officer
is based on material developed jointly by the
Government of the United States of America and the
Director General of Shipping, Government of India.

It has been prepared by the United States Merchant Marine Academy at Kings Point,
New York and the Anglo Eastern Maritime Training Centre, Mumbai.

IMO wishes to express its sincere appreciation to the governments of the United States of America and India for their provision of expert assistance, valuable cooperation, and generous funding in support of this work.

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Foreword

Since its inception the International Maritime Organization has recognized the importance of human resources to the development of the maritime industry and has given the highest priority to assisting developing countries in enhancing their maritime training capabilities through the provision or improvement of maritime training facilities at national and regional levels. IMO has also responded to the needs of developing countries for postgraduate training for senior personnel in administration, ports, shipping companies and maritime training institutes by establishing the World Maritime University in Malmö, Sweden, in 1983.

Following the earlier adoption of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, a number of IMO Member Governments had suggested that IMO should develop model training courses to assist in the implementation of the Convention and in achieving a more rapid transfer of information and skills regarding new developments in maritime technology. IMO training advisers and consultants also subsequently determined from their visits to training establishments in developing countries that the provision of model courses could help instructors improve the quality of their existing courses and enhance their effectiveness in meeting the requirements of the Convention and implementing the associated Conference and IMO Assembly resolutions.

In addition, it was appreciated that a comprehensive set of short model courses in various fields of maritime training would supplement the instruction provided by maritime academies and allow administrators and technical specialists already employed in maritime administrations, ports and shipping companies to improve their knowledge and skills in certain specialized fields. IMO has therefore developed the current series of model courses in maritime security in response to these generally identified needs and with the generous assistance of the United States and India.

These model courses may be used by any training institution and the Organization is prepared to assist developing countries in implementing any course when the requisite financing is available.

W.A. O'Neill
Secretary-General

Introduction

Purpose of the model courses

The purpose of the IMO model courses is to assist maritime training institutes and their teaching staff in organizing and introducing new training courses, or in enhancing, updating or supplementing existing training material where the quality and effectiveness of the training courses may thereby be improved.

It is not the intention of the model course program to present instructors with a rigid "teaching package" which they are expected to "follow blindly". Nor is it the intention to substitute audio-visual or "programmed" material for the instructor's presence. As in all training endeavors, the knowledge, skills and dedication of the instructor are the key components in the transfer of knowledge and skills to those being trained through IMO model course material.

Because educational systems and the cultural backgrounds of trainees in maritime subjects vary considerably from country to country, the model course material has been designed to identify the basic entry requirements and trainee target group for each course in universally applicable terms, and to specify clearly the technical content and levels of knowledge and skill necessary to meet the technical intent of IMO conventions and related recommendations.

Use of the model course

To use the model course the instructor should review the course plan and detailed syllabus, taking into account the information provided under the entry standards specified in the course framework. The actual level of knowledge and skills and the prior technical education of the trainees should be kept in mind during this review, and any areas within the detailed syllabus which may cause difficulties because of differences between the actual trainee entry level and that assumed by the course designer should be identified. To compensate for such differences, the instructor is expected to delete from the course, or reduce the emphasis on, items dealing with knowledge or skills already attained by the trainees. He should also identify any academic knowledge, skills or technical training which they may not have acquired.

By analyzing the detailed syllabus and the academic knowledge required to allow training in the technical area to proceed, the instructor can design an appropriate pre-entry course or, alternatively, insert the elements of academic knowledge required to support the technical training elements concerned at appropriate points within the technical course.

Adjustment of the course objectives, scope and content may also be necessary if in your maritime industry the trainees completing the course are to undertake duties which differ from the course objectives specified in the model course.

Within the course plan the course designers have indicated their assessment of the time that should be allotted to each learning area. However, it must be appreciated that these allocations are arbitrary and assume that the trainees have fully met all entry requirements of the course. The instructor should therefore review these assessments and may need to re-allocate the time required to achieve each specific learning objective.

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Lesson plans

Having adjusted the course content to suit the trainee intake and any revision of the course objectives, the instructor should draw up lesson plans based on the detailed syllabus. The detailed syllabus contains specific references to the textbooks or teaching material proposed for use in the course. Where no adjustment has been found necessary in the learning objectives of the detailed syllabus, the lesson plans may simply consist of the detailed syllabus with keywords or other reminders added to assist the instructor in making his presentation of the material.

Presentation

The presentation of concepts and methodologies must be repeated in various ways until the instructor is satisfied that the trainee has attained each specific learning objective. The syllabus is laid out in learning-objective format and each objective specifies *what the trainee must be able to do* as the learning outcome.

Implementation

For the course to run smoothly and to be effective, considerable attention must be paid to the availability and use of:

- properly qualified instructors;
- support staff;
- rooms and other spaces;
- equipment;
- textbooks, technical papers; and
- other reference material.

Thorough preparation is the key to successful implementation of the course. IMO has produced "Guidance on the Implementation of IMO Model Courses," which deals with this aspect in greater detail and is included as an attachment to this course.

Part A: Course Framework

Aims

This model course aims to provide knowledge to those who may be designated to perform the duties and responsibilities of a Ship Security Officer (SSO), as defined in section A/2.1.6 (and section A/12.1) of the ISPS Code, and in particular the duties and responsibilities with respect to the security of a ship, for implementing and maintaining a Ship Security Plan and for liaising with the Company Security Officer (CSO) and with Port Facility Security Officers (PFSOs).

Objective

Those who successfully complete this course should be able to undertake the duties and responsibilities as Ship Security Officer, as defined in section A/12.2 of the ISPS Code, which include, but are not limited to:

.1 undertaking regular security inspections of the ship to ensure that appropriate security measures are maintained;

.2 maintaining and supervising the implementation of the Ship Security Plan, including any amendments to the plan;

.3 coordinating the security aspects of the handling of cargo and ship's stores with other shipboard personnel and with the relevant Port Facility Security Officers;

.4 proposing modifications to the Ship Security Plan;

.5 reporting to the Company Security Officer any deficiencies and non-conformities identified during internal audits, periodic reviews, security inspections and verifications of compliance and implementing any corrective actions;

.6 enhancing security awareness and vigilance on board;

.7 ensuring that adequate training has been provided to shipboard personnel, as appropriate;

.8 reporting all security incidents;

.9 coordinating implementation of the Ship Security Plan with the Company Security Officer and the relevant Port Facility Security Officer; and

.10 ensuring that security equipment is properly operated, tested, calibrated and maintained, if any.

Entry standards

It is assumed that those attending this course will be serving seafarers (or other shipboard personnel) and that they are likely to be designated as Ship Security Officer. However, no specific entry requirements are envisaged.

Course certificate, diploma or document

Documentary evidence should be issued to those who have successfully completed this course indicating that the holder has completed training as "Ship Security Officer" based on this model course.

Course delivery

The outcome of this course may be achieved through various methods, including classroom training, in-service training, distance learning, computer-based training or combinations of these methods.

Course intake limitations

The maximum number of trainees should depend on the facilities and equipment available, bearing in mind the aims and objectives of this course.

Staff requirements

The instructor in charge of the course should have adequate experience in maritime security matters and should have knowledge of the requirements of Chapter XI-2 of SOLAS 74 as amended and of the ISPS Code.

It is recommended that instructors should either have appropriate training in or be familiar with instructional techniques and training methods.

Teaching facilities and equipment

An ordinary classroom or similar meeting room with a blackboard or equivalent is sufficient for the lectures. In addition, when making use of audiovisual materials, it should be ensured that appropriate equipment is available. Finally, the use of shipboard environments (vessels or mock- ups) for certain segments of the course may enhance the overall effectiveness of this training.

Teaching aids (A)

A1 IMO Model Course x.xx, Ship Security Officer

A1.1 Course Framework (Part A of the course)

A1.2 Instructor Manual (Part D of the course)

A2 Audiovisual aids: video cassette player, TV, slide projector, overhead projector, etc.

A3 Photographs, models, or other representations of various vessels and vessel parts to illustrate operational elements and security vulnerabilities.

A4 Video cassette(s):

V1 *Ship Security Officer Guide to ISPS*

Available from: Maritime Training Services, Inc.
2633 Eastlake Avenue East, Suite 302
Seattle, WA 98102 USA
001 206 467 8458

V2 *Shipboard Security Awareness*

Available from: Ship Operations Cooperative Program
C/o Mr. Ram Nagendran
PRC, Inc. MS 6S3
1500 PRC Drive
McLean, VA 22102 USA

V3 *Organise Your Security*

Available from: Anglo Eastern Maritime Training Centre
(further details to follow)

A5 Distance learning package(s):

D1 *Shipboard Security*

Available from: Videotel
84 Newman Street
London W1T 3EU
UK
+44 207 299 1800

A6 National legislative and regulatory references

■ Bibliography (B)

B1 The American Waterways Operators. (2002, April). *AWO Model Vessel Security Plan*. Arlington, VA: AWO.

B2 Fernandez, L., & Merzer, M. (2003). *Jane's Crisis Communications Handbook*, (1st ed.). Alexandria: Jane's Information Group.

B3 Hawkes, K. G. (1989). *Maritime Security.* Centreville: Cornell Maritime Press.

B4 International Chamber of Shipping. (2001, November). *Guidance for Shipowners, Ship Operators and Masters on the Protection of Ships from Terrorism and Sabotage.* London: ICS.

B5 Republic of Liberia. (2002, April). *Proposed Security Manual for Ships and Mobile Offshore Drilling Units.* MSC/Inf. 27. London: International Maritime Organization.

B6 Sidell, F. R., et al. (2002). *Jane's Chem-Bio Handbook*. (2nd ed.). Alexandria: Jane's Information Group.

B7 Sullivan, J. P., et al. (2002). *Jane's Unconventional Weapons Response Handbook.* (1st ed.). Alexandria: Jane's Information Group.

B8 United States Department of Transportation. Volpe National Transportation Systems Center. (1999). *Intermodal Cargo Transportation: Industry Best Security Practice*s. Cambridge: Volpe Center.

B9 Viollis, P., et al. (2002). *Jane's Workplace Security Handbook.* (1st ed.). Alexandria: Jane's Information Group.

■ IMO references (R)

R1 International Maritime Organization. (2003). *International Ship & Port Facility Security (ISPS) Code, 2003 and December 2002 Amendments to SOLAS*. London: IMO. (IMO-I116E).
R1.1 SOLAS Chapter XI-1
R1.2 SOLAS Chapter XI-2
R1.3 ISPS Code Part A
R1.4 ISPS Code Part B

■ Textbooks (T)

No specific textbooks are recommended for use by trainees.

Part B: Course Outline

Subject Area		Hours
1	**Introduction**	1.5
1.1	Course overview	
1.2	Competencies to be achieved	
1.3	Historical perspective	
1.4	Current security threats and patterns	
1.5	Ship and port operations and conditions	
2	**Maritime Security Policy**	1.0
2.1	Relevant international conventions, codes, and recommendations	
2.2	Relevant government legislation and regulations	
2.3	Definitions	
2.4	Legal implications of action or non-action by the Ship Security Officer	
2.5	Handling sensitive security-related information and communications	
3	**Security Responsibilities**	1.5
3.1	Contracting governments	
3.2	Recognized Security Organizations	
3.3	The company	
3.4	The ship	
3.5	The port facility	
3.6	Ship Security Officer	
3.7	Company Security Officer	
3.8	Port Facility Security Officer	
3.9	Vessel personnel with specific security duties	
3.10	Facility personnel with specific security duties	
3.11	Other personnel	

Subject Area		Hours
4	**Ship Security Assessment**	1.0
4.1	Risk assessment methodology	
4.2	Assessment tools	
4.3	On-scene security surveys	
4.4	Security assessment documentation	
5	**Security Equipment**	1.0
5.1	Security equipment and systems	
5.2	Operational limitations of security equipment and systems	
5.3	Testing, calibration and maintenance of security equipment and systems	
6	**Ship Security Plan**	1.0
6.1	Purpose of the Ship Security Plan	
6.2	Contents of the Ship Security Plan	
6.3	Confidentiality issues	
6.4	Implementation of the Ship Security Plan	
6.5	Maintenance and modification of the Ship Security Plan	
7	**Threat Identification, Recognition, and Response**	1.5
7.1	Recognition and detection of weapons, dangerous substances and devices	
7.2	Methods of physical searches and non-intrusive inspections	
7.3	Implementing and coordinating searches	
7.4	Recognition, on a non-discriminatory basis, of persons posing potential security risks	
7.5	Techniques used to circumvent security measures	
7.6	Crowd management and control techniques	

Subject Area		Hours
8	**Ship Security Actions**	1.0
	8.1 Actions required by different security levels	
	8.2 Maintaining security of the ship/port interface	
	8.3 Usage of the Declaration of Security	
	8.4 Implementation of security procedures	
9	**Emergency Preparedness, Drills, and Exercises**	1.0
	9.1 Contingency planning	
	9.2 Security drills and exercises	
	9.3 Assessment of security drills and exercises	
10	**Security Administration**	1.0
	10.1 Documentation and records	
	10.2 Reporting security breaches	
	10.3 Monitoring and control	
	10.4 Security audits and inspections	
	10.5 Reporting nonconformities	
11	**Security Training**	0.5
	11.1 Training requirements	
	Total:	12.0

Ship Security Officer
Course Timetable

Day/Period	1st Period (1.5 hours)	2nd Period (1.5 hours)	3rd Period (1.5 hours)	4th Period (1.5 hours)
Day 1	**1 Introduction** 1.1 Course overview 1.2 Competencies to be achieved 1.3 Historical perspective 1.4 Current security threats and patterns 1.5 Ship and port operations and conditions	**2 Maritime Security Policy** 2.1 Relevant international conventions, codes, and recommendations 2.2 Relevant government legislation and regulations 2.3 Definitions 2.4 Legal implications of action or non-action by the Ship Security Officer 2.5 Handling sensitive security-related information and communications **3 Security Responsibilities** 3.1 Contracting governments 3.2 Recognized Security Organizations 3.3 The company 3.4 The ship	3.5 The port facility 3.6 Ship Security Officer 3.7 Company Security Officer 3.8 Port Facility Security Officer 3.9 Vessel personnel with specific security duties 3.10 Facility personnel with specific security duties 3.11 Other personnel **4 Ship Security Assessment** 4.1 Risk assessment methodology 4.2 Assessment tools	4.3 On-scene security surveys 4.4 Security assessment documentation **5 Security Equipment** 5.1 Security equipment and systems 5.2 Operational limitations of security equipment and systems 5.3 Testing, calibration and maintenance of security equipment and systems

Day/Period	1st Period (1.5 hours)	2nd Period (1.5 hours)	3rd Period (1.5 hours)	4th Period (1.5 hours)
Day 2	**6 Ship Security Plan** 6.1 Purpose of the Ship Security Plan 6.2 Contents of the Ship Security Plan 6.3 Confidentiality issues 6.4 Implementation of the Ship Security Plan 6.5 Maintenance and modification of the Ship Security Plan **7 Threat Identification, Recognition, and Response** 7.1 Recognition and detection of weapons, dangerous substances and devices	7.2 Methods of physical searches and non-intrusive inspections 7.3 Implementing and coordinating searches 7.4 Recognition of persons posing potential security risks 7.5 Techniques used to circumvent security measures 7.6 Crowd management and control techniques **8 Ship Security Actions** 8.1 Actions required by different security levels 8.2 Maintaining security of the ship/port interface	8.3 Usage of the Declaration of Security 8.4 Implementation of security procedures **9 Emergency Preparedness, Drills, and Exercises** 9.1 Contingency planning 9.2 Security drills and exercises 9.3 Assessment of security drills and exercises	**10 Security Administration** 10.1 Documentation and records 10.2 Reporting security breaches 10.3 Monitoring and control 10.4 Security audits and inspections 10.5 Reporting nonconformities **11 Security Training** 11.1 Training requirements

Part C: Detailed Teaching Syllabus

The detailed teaching syllabus has been written in learning objective format in which the objective describes what the trainee should be able to do to demonstrate that knowledge has been transferred. All objectives are understood to be prefixed by the words, "The expected learning outcome is that the trainee ....."

In order to assist the instructor, references are shown against the learning objectives to indicate IMO references and publications, additional technical material and teaching aids, which the instructor may wish to use when preparing course material. The material listed in the course framework has been used to structure the detailed teaching syllabus; in particular:

Teaching aids (indicated by A);

IMO references (indicated by R);

will provide valuable information to instructors. The abbreviations used are:

add.: addendum

app.: appendix

art.: article

ch.: chapter

encl. : enclosure

p.: page

pa.: paragraph

reg.: regulation

sect.: section

The following are examples of the use of references:

R1.2 reg.1 refers to regulation 1 of the December, 2002 Amendments to the 1974 SOLAS Convention;

AI.2 pa.5 refers to training area 5 ("Security Equipment") in the guidance notes of the instructor manual.

■ Note

Throughout the course, safe working practices are to be clearly defined and emphasized with reference to current international requirements and regulations. It is expected that the national institution implementing the course will insert references to national and/or regional requirements and regulations as necessary.

■ Competences

The competences required by candidates may be expressed as follows:

1. Maintain and supervise the implementation of a Ship Security Plan;

2. Assess security risk, threat, and vulnerability;

3. Undertake regular inspections of the ship to ensure appropriate security measures are implemented and maintained;

4. Ensure that security equipment and systems, if any, are properly operated, tested and calibrated; and

5. Encourage security awareness and vigilance.

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
1. Introduction (1.5 hours) 1.1. Course overview .1 describes the topics and emphasis of the course 1.2. Competencies to be achieved .1 describes the competencies that will be achieved through completion of the course 1.3. Historical perspective .1 describes representative incidents involving criminal activity in the maritime environment .2 summarizes incident statistics and discusses underlying motivation and results 1.4. Current security threats and patterns .1 identifies threats to the maritime transport industry, such as: ➢ piracy and armed attacks ➢ terrorism ➢ contraband smuggling ➢ stowaways and refugees ➢ cargo theft ➢ collateral damage 1.5. Ship and port operations and conditions .1 characterizes the intermodal nature of transportation and the interfaces between ships and other modes		B8	A1.1 A1.2 pa. 1.3 A1.2 pa. 1.4
2. Maritime Security Policy (1.0 hours) 2.1. Relevant international conventions, codes, and recommendations .1 lists previous efforts of IMO towards maritime security, such as MSC/Circ.443, SUA Act, etc. .2 describes the rapidity with which IMO acted to enhance maritime security following 9/11 .3 summarizes the amendments to SOLAS Chapter XI and the contents of the ISPS Code 2.2. Relevant government legislation and regulations .1 states the requirements of relevant national legislation and regulations. 2.3. Definitions .1 defines	R1.2 reg. 1		A1.2 pa. 2.1 A1.2 pa. 2.2

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
➢ Ship Security Plan ➢ Company Security Officer ➢ Ship Security Officer ➢ Port facility ➢ Ship / Port Interface ➢ Ship to ship activity ➢ Port Facility Security Officer ➢ Designated Authority ➢ Recognized Security Organization ➢ Declaration of Security ➢ Security incident ➢ Security Level ➢ the three security levels 2.4. Legal implications of action or non-action by security personnel .1 identifies the legal limits of authority and the obligations of personnel with security duties 2.5. Handling sensitive security-related information and communications .1 defines security sensitive information and the importance of keeping it confidential	R1.3 pa. 2.1.9 – 2.1.11	B3 B2, B3	
3. **Security Responsibilities** (1.5 hours) 3.1. Contracting governments .1 describes the responsibilities of contracting governments with respect to SOLAS Chapter XI-2 and the ISPS Code 3.2. Recognized Security Organizations .1 characterizes the role of the Recognized Security Organization and identifies the extent of its function 3.3. The company .1 describes the responsibilities of the company with respect to: ➢ ensuring Master has documents on board relating to the crewing of the vessel and its employment ➢ ensuring that the Ship Security Plan contains a clear statement emphasizing the master's authority ➢ designating a Company Security Officer and	R1.3 pa. 4 R1.4 pa. 4.3 - 4.6 R1.2 reg. 5 R1.3 pa. 6 R1.2 reg. 8 R1.3 pa. 6.1		

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
a Ship Security officer and ensuring that they are given the necessary support to fulfill their duties and responsibilities			
3.4. The ship	R1.3 pa. 7		
.1 states that the ship shall comply with the requirements of the Ship Security Plan as per the security level set			
3.5. The port facility	R1.3 pa. 14		
.1 states that port facilities shall comply with the relevant requirements of Chapter XI-2 of SOLAS and the ISPS Code			
.2 states that the port facility shall act upon the security levels set by the Administration within whose territory it is located			
3.6. Ship Security Officer	R1.3 pa. 12		
.1 states that the company shall designate a Ship Security Officer for each ship			
.2 lists the duties and responsibilities of the Ship Security Officer			
3.7. Company Security Officer	R1.3 pa. 11		
.1 states that the company shall designate a Company Security Officer			
.2 describes that the person designated as Company Security Officer may act as Company Security Officer for one or more ships provided that it is clearly identified for which ships he is responsible			
.3 indicates that the company may designate several persons as Company Security Officer provided that it is clearly identified for which ships each is responsible			
.4 lists the duties and responsibilities of the Company Security Officer			
3.8. Port Facility Security Officer	R1.3 pa. 17		
.1 states that the Port Facility Security Officer shall be designated for each port facility			
.2 states that a person may be designated as the Port Facility Security Officer for one or more port facilities			
.3 lists the duties and responsibilities of the Port Facility Security Officer			
3.9. Shipboard personnel with specific security duties			
.1 states that members of the ship's crew may be assigned security duties in support of the			

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
Ship Security Plan 3.10. Port facility personnel with specific security duties .1 states that port facility personnel other than the PFSO may be assigned security duties in support of the port facility Security Plan 3.11. Other personnel .1 States that other shipboard and port facility personnel may have a role in the enhancement of maritime security .2 states that personnel other than ship or facility personnel may have a role in the enhancement of maritime security			
4. Ship Security Assessment (1.0 hour) 4.1. Risk assessment methodology .1 states the basic principles of risk assessment in day-to-day operations 4.2. Assessment tools .1 discusses the use of checklists in conducting security assessments 4.3. On-scene security surveys .1 lists the preparations required prior to an on-scene survey .2 lists the procedures and measures and operations to be evaluated during an on-scene survey .3 discusses the security aspects of ship layout .4 divides the survey into the following sections: ➢ Physical Security ➢ Structural Integrity ➢ Personnel Protection Systems ➢ Procedural Policies ➢ Radio and Telecommunication Systems ➢ Other Areas .5 discusses the importance and elements of physical security aboard ship .6 describes the significance of structural integrity for ships and other structures .7 discusses the components and operations of systems to protect shipboard personnel .8 states the role of proper procedures in	R1.3 pa. 8 R1.4 pa. 8.14	B3	A6

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
preventing and mitigating security incidents .9 describes the use of information technology and communications systems in ship operations and in maintaining security .10 identifies other areas that may, if damaged or used for illicit observation, pose a risk to persons, property, or operations aboard the ship or within a port facility .11 discusses the identification of vulnerabilities in the above areas and the preparation of countermeasures to address them .12 states the importance of having in place emergency plans to deal with contingencies .13 explains and demonstrates how to carry out a security assessment with new measures in place and checks if further mitigating measures are required 4.4. Security assessment documentation .1 describes proper form and practice for recording day-to-day security assessment results			
5. **Security Equipment** (1.0 hour) 5.1. Security equipment and systems .1 lists the various types of security equipment and systems that can be used aboard ships and in port facilities 5.2. Operational limitations of security equipment and systems .1 explains the limitations of individual items of equipment and security systems 5.3. Testing, calibration and maintenance of security equipment and systems .1 describes the testing, calibration and maintenance requirements for the above security equipment and systems			A1.2 pa. 5

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
6. **Ship Security Plan** (1.0 hour)	R1.3 pa. 9 R1.4 pa. 9	B3	
6.1. Purpose of the Ship Security Plan			
.1 states that each ship shall carry a Ship Security Plan approved by the Administration			
.2 explains that the Ship Security Plan addresses the security measures that should be taken at each security level			
6.2. Contents of the Ship Security Plan			A6
.1 lists the required elements of a Ship Security Plan			
.2 states that the Ship Security Plan shall establish procedures for the performance of ship security duties.			
6.3. Confidentiality issues			
.1 states that the Ship Security Plan is confidential			
.2 states that the Ship Security Plan is not subject to inspection by Port State Control			
.3 describes the circumstances under which certain sections of the plan may be shown to Port State Control Authorities			
6.4. Implementation of the Ship Security Plan			
.1 explains procedures to be employed in implementing the Ship Security Plan			
.2 explains the requirement to coordinate implementation of the Ship Security Plan with the Company Security Officer and the Port Facility Security Officer			
.3 discusses the importance of giving due regard to the effect that security measures may have on shipboard personnel who may remain on board the ship for long periods	R1.4 pa. 8.11		
6.5. Maintenance and modification of the Ship Security Plan	R1.3 pa. 9 R1.4 pa. 9		
.1 explains mechanisms for ensuring the continuing effectiveness and updating of the Ship Security Plan			
.2 explains the procedures for implementing any corrective actions			
.3 states that amendments to the plan shall not be implemented unless approved by the Administration			

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
7. Threat Identification, Recognition, and Response (1.5 hours) 7.1. Recognition and detection of weapons, dangerous substances and devices .1 describes the various types of weapons, dangerous substances and devices, the damage they can cause, and their appearance 7.2. Methods of physical searches and non-intrusive inspections .1 demonstrates how to carry out physical searches and non-intrusive inspections. 7.3. Implementing & coordinating searches .1 describes the equipment the search team should carry for conducting a search .2 describes the procedures to be followed for an efficient search .3 describes the various places of concealment on board a ship 7.4. Recognition, on a non-discriminatory basis, of persons posing potential security risks .1 describes the general characteristics and behavioral patterns of persons who are likely to threaten security .2 states how important it is to be observant to recognize such persons 7.5. Techniques used to circumvent security measures .1 describes the techniques that may be used to circumvent security measures 7.6. Crowd management and control techniques .1 explains the basic psychology of a crowd in a crisis situation .2 states the importance of clear communication with crew and passengers during an emergency		B3, B6, B7	A1.2 pa. 7
8. Ship Security Actions (1.0 hours) 8.1. Actions required by different security levels .1 states the three security levels and the actions required for each level. 8.2. Maintaining security of the ship/port interface .1 lists the reporting requirements for the ship prior entering port	R1.3 pa. 7		

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
8.3. Usage of the Declaration of Security .1 explains the Declaration of Security and what it addresses. .2 states who determines when it should be completed .3 lists the situations in which the ship can request that the Declaration of Security be completed. .4 states who is required to complete it 8.4. Implementation of security procedures .1 states the requirements for the Ship Security Officer to carry out regular security inspections .2 lists the security measures and procedures at the three security levels required to: ➢ ensure the performance of all ship security duties ➢ control access to the ship ➢ control the embarkation of persons and their effects ➢ monitor restricted areas to ensure only authorized persons have access ➢ monitor deck areas and areas surrounding the ship ➢ coordinate the security aspects of the handling of cargo and ship's stores; and ➢ ensure that security communication is readily available	R1.3 pa. 5 R1.4 app. 1		A6 A6
9. Emergency Preparedness, Drills, and Exercises (1.0 hour) 9.1. Contingency planning .1 discusses action to take in case of a breach of security .2 discusses contingency plans for: ➢ hijacking ➢ bomb threat ➢ unidentified objects / explosives on vessel ➢ damage to / destruction of port facility ➢ piracy ➢ stowaways 9.2. Security drills and exercises .1 states the requirements for conducting drills and exercises	R1.3 pa. 13.4	B3	A1.2 pa. 9

Learning Objectives	IMO Reference	Biblio graphy	Teaching Aid
9.3. Assessment of security drills and exercises .1 states the purpose of carrying out an assessment at the end of each drill			
10. Security Administration (1.0 hour) 10.1. Documentation and records .1 states the documents that shall be available on board at all times .2 describes the International Ship Security Certificate, its validity and verification requirements .3 states the requirements of the Continuous Synopsis Record and what it shall contain .4 states the activities for which records shall be kept on board and the duration for which they should be retained. 10.2. Reporting security incidents .1 states the reporting requirements in case of a security incident 10.3. Monitoring and control .1 states the requirements for the Master and Ship Security Officer to review the Ship Security Plan 10.4. Security audits and inspections .1 states the requirements for carrying out internal audits and inspections 10.5. Reporting nonconformities .1 states the requirements for reporting nonconformities and deficiencies identified during internal audits, periodic reviews, and security inspections	R1.3 pa. 10 R1.3 app.1 and 2 R1.1 reg. 5 R1.3 pa. 12.2.8		
11. **Security Training** (0.5 hour) 11.1. Training requirements .1 Explains which personnel must receive training and in what subjects they must be trained .2 Explains the requirement for enhancing security awareness and vigilance onboard	R1.3 pa. 13	B3	
Total: 12.0 hours			

Part D: Instructor Manual

The instructor manual provides guidance on the material that is to be presented during the Ship Security Officer course. This manual reflects the views of the course developers with respect to methodology and organization as well as what they consider relevant and important in light of their experience as instructors. Although the guidance given should be of value initially, each instructor should develop his/her own methods and ideas, recognize and refine what is successful, and discard that which does not work satisfactorily.

The material has been arranged under the following eleven main headings:

1 Introduction

2 Maritime Security Policy

3 Security Responsibilities

4 Ship Security Assessment

5 Security Equipment

6 Ship Security Plan

7 Threat Identification, Recognition, and Response

8 Ship Security Actions

9 Emergency Preparedness, Drills, and Exercises

10 Security Administration

11 Security Training

The course outline and timetable provide guidance on the time allocation for the course material, but the instructor is free to modify this if it is deemed necessary. The detailed teaching syllabus must be studied carefully and, where appropriate, lesson plans or lecture notes compiled.

Preparation and planning are the most important criteria in effectively presenting this course. Availability and proper use of course materials is also essential for maximum efficacy in conveying the subject to trainees. The capabilities and limitations of the facilities in use may dictate that the learning objectives be adjusted but it is suggested that this be kept to a minimum.

This course employs no practical demonstrations and therefore the transference of subject matter to the trainee is largely accomplished by lectures and the like. In this regard instructors are encouraged to concentrate on effective lecturing techniques so that the trainee's interest level is maintained. Where possible, lectures should be supported by written course materials, videos, and other media that allow the trainee to embrace the material more fully. It will be necessary to prepare material for use with overhead projectors or for distribution to trainees as handouts.

Guidance Notes

1 Introduction

1.1 Course overview

As with other IMO Model Courses the starting point should be a brief statement of the purpose of the course, a short review of the timeline, an introduction of participants, determination of knowledge and experience levels, and a brief description of the teaching facility.

1.2 Competencies to be achieved

The aim of the course is stated, competences from Part C of the course are reviewed, and the outcome of the learning objectives is made clear; namely, that "the expected learning outcome is that the trainee ....."

Instructors should emphasize that no one is being trained to fight or similarly respond to security threats but rather that trainees should be able to identify, deter, or mitigate such actions through proper planning, preparation, and coordination with various entities.

1.3 Historical perspective

Trainees are most likely to appreciate the seriousness and proportions of the problem of security in general and maritime security in particular if they have a sense of the relevant history. Notable examples of security incidents should be relayed to this end. These might include the Achille Lauro in 1985, Pan Am Flight 103 in 1988, the Mumbai bomb blasts of 1993, the World Trade Center bombing in 1993, the hijackings of the M.T. Petro Ranger in 1998 and the M.V. Alondra Rainbow in 1999, the bomb attack on the USS Cole in 2000, the hijacking of the M.V. Inabukwa in 2001, the terrorist attacks of September 11, 2001 on the World Trade Center and the Pentagon, the hijacking of the MT Han Wei in 2002 and the explosion of the Limburg in 2002.

1.4 Current security threats and patterns

Current threats to maritime security should be summarized in order to provide a basis for understanding of the recent conventions and legislation in this area and to fully grasp the importance of the training provided by this course. The prospective security officers receiving this training must clearly sense the reality of today's security issues. Some may have adopted a mindset that places the problem of security in the past or in such a remote corner that it appears distant or irrelevant. Before continuing on with the course this mindset should be identified and addressed.

Piracy and armed attacks continue to occur on an all too frequent basis. Attacks occur mostly in port areas whereas piracy by definition usually occurs on ships at sea. In fact, the United Nations Convention on the Law of the Sea, Article 101, defines piracy as any of the following acts: illegal acts of violence or detention or any act of depredation committed for private ends by the crew or the passengers of a private ship or private aircraft and directed on the high seas against another ship or aircraft or against persons or property on board such ship or aircraft. It also includes such acts against a ship, aircraft, person or property in a place outside of the jurisdiction of any State.

Terrorism usually involves violence or the threat of violence by extremist groups seeking to gain political objectives by other than democratic means. Various types of bombs or bomb threats may be employed or hijacking may be the method by which the terrorist group hopes to make a statement. Increasingly terrorists are acting in connection with extremist religious sects that promote suicidal behavior.

Contraband smuggling, a criminal activity, may result in large financial loss to the shipowner whose ship is being used by the smugglers. Often drugs are the commodity being smuggled and they may be brought on board in a number of creative ways such as in luggage, stores, on or in a person's body, or in electronic equipment to name a few. Weapons are also a frequent item associated with smuggling and they too find their way on board in creative ways such as cargo containers.

Cargo theft, an age-old problem, continues to plague the maritime industry and causes financial losses in staggering amounts. Prevention is normally the most effective method of dealing with this security threat. Although there may not be violence or political issues involved in most cargo theft cases, this matter remains high on the list of security threats and requires solutions discussed in this course. Instructors should convey that cargo theft is only one of the various threats to the security of cargo. Other such security threats should be discussed during this section of the course.

Collateral damage occurs when a nearby fire, explosion, or attack results in damage to a ship or facility. While the damage is sometimes unintended, the costs are nevertheless real. There are measures that may minimize the consequences of this type of damage.

1.5 Ship and port operations and conditions

This section of the course should provide trainees with sufficient understanding of the larger transportation and logistics context in which maritime operations occur to render them able to effectively undertake their security responsibilities. A basic understanding of the general patterns and mechanisms of cargo and passenger movement through international and intermodal transportation chains is essential for those who are charged with enhancing maritime security. Discussion of the operational interfaces between maritime and other modes is a central component of this segment of the course. Trainees should also be exposed to the fundamentals of cargo tracking and related information systems in the context of security.

2 Maritime Security Policy

2.1 Relevant international conventions, codes, and recommendations

Trainees should appreciate the attempts by international bodies to minimize, stop, or otherwise control threats to security in maritime transportation. The International Maritime Organization (IMO) has adopted a number of resolutions and conventions to this end. For example, Resolution A.545(13)--Measures To Prevent Acts Of Piracy And Armed Robbery Against Ships was signed in 1983. In 1985 came IMO Resolution A.584 (14)--Measures To Prevent Unlawful Acts Which Threaten Safety Of Ships And Security Of Passengers (this was later reviewed in November of 2001 with IMO Resolution A.924(22)). Then in 1986 the IMO approved MSC/Circ.443--Measures To Prevent Unlawful Acts Against Passengers And Crew On Board Ships. In 1988 came the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA) treaties aimed at ensuring that appropriate judicial action is taken against persons committing unlawful acts against ships which would include the seizure of ships by force, acts of violence against persons on board ships, and placing devices on board a ship

which are likely to destroy or damage it. The convention obliges contracting governments either to extradite or prosecute alleged offenders. The SUA came into effect on March 1, 1992.

Following the tragic events in New York and Washington on September 11, 2001 the twenty-second session of the International Maritime Organization, in November of 2001, unanimously agreed to the development of new measures relating to the security of ships and of port facilities for adoption by a Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 in December of 2002 (the Diplomatic Conference). This timetable of little more than a year represents a landmark achievement for the IMO and provides a clear indication of the gravity of the situation as well as the intention to protect world shipping against security incidents and threats.

The meeting of the Diplomatic Conference in December of 2002 resulted in amendments to SOLAS 74. These amendments enter into force on July 1, 2004. A brief summary of these amendments should be carried out with mention of changes to Chapter V but with emphasis on the changes to Chapter XI, Regulations 3 and 5 and the new Chapter XI-2 Regulations 1-13 and the ISPS Code. Since portions of the ISPS Code will be studied in more depth in later sections of the course, the summary here can be brief.

2.2 Relevant government legislation and regulations

It would be helpful for trainees to understand that some governments have acted on a national level to produce legislation and/or regulations concerned with measures to enhance maritime security. Instructors may wish to use the Maritime Transportation Security Act of 2002 (MTSA 2002) and the Customs-Trade Partnership Against Terrorism (C-TPAT) as examples, or may elect to use some other nation's legislation to illustrate the focus of this section of the course.

Some of the key features of the MTSA are as follows:

- Requirements for port, facility, and vessel vulnerability assessments
- Preparation by the Secretary of Transportation of a National Maritime Transportation Security Plan and Area Plans for each U.S. Coast Guard Captain of the Port Zone
- Development of security plans for certain facilities and commercial vessels
- The issuance and use of Transportation Security Cards for personnel whose responsibilities require them to access secure spaces aboard ships
- Establishment of a permanent program of grants to facilitate the enhancement of maritime security
- Assessment by the Secretary of Transportation of the effectiveness of antiterrorism measures at foreign ports
- Establishment of an enhanced system of foreign seafarer identification
- Creation of Maritime Security Advisory Committees at national and area levels
- Installation and operation of Automatic Identification Systems aboard certain commercial vessels
- Establishment of a program to better secure international intermodal transportation systems, to include cargo screening, tracking, physical security, compliance monitoring, and related issues.
- Provision of civil penalties for violation of statutes or regulations

- Extension of seaward jurisdiction of the Espionage Act of 1917 to 12 nautical miles offshore of the territorial sea baseline
- Codification of the U.S. Coast Guard Sea Marshall program and consideration of utilizing merchant mariners and other personnel to assist the Coast Guard
- Requirements that shipment data be provided electronically to U.S. Customs prior to arrival or departure of cargo
- Reporting by the Secretary of Transportation to Congress on foreign-flag vessels calling at United States ports
- Development of standards and curricula for maritime security professional training

The Customs-Trade Partnership Against Terrorism (C-TPAT) is a program through which U.S. Customs provides streamlined clearance of cargo to firms that establish appropriate security procedures. The Container Security Initiative (CSI) is another program in which U.S. Customs is working with foreign ports to identify potentially dangerous shipments before they arrive in the United States.

2.3 Definitions

Trainees will need a working knowledge of several terms found in SOLAS Chapter XI-2 Regulation 1 and in the ISPS Code Part A section 2. These terms may well need clarification from an experienced instructor in order for trainees to reach the necessary level of understanding. For instance, it might require emphasis or other clarification by the instructor to establish that the Ship Security Officer is a person on board the ship and in that sense it may be impossible for a Company Security Officer to also act as the Ship Security Officer.

2.4 Legal implications of action or non-action by security personnel

Action or non-action by security personnel is likely to have legal implications which may vary from one place to another and which are not entirely clear at this time. Personnel will have certain authorities and obligations yet they will also find that they face certain constraints. Instructors should carefully monitor developments locally and internationally along this line and be sure to bring the most recent information into each class as it is taught.

2.5 Handling sensitive security-related information and communications

Trainees should understand that certain information and communications will be considered security sensitive and that the level of sensitivity may change, as do levels of security 1, 2, and 3. Heretofore benign conversations may result in disastrous consequences and all personnel will need to appreciate the risk of security leaks through communication by improper methods or to the wrong persons.

3 Security Responsibilities

This section is intended to give trainees a clear picture of the proportions of the maritime security system conceived of by the IMO and to show how the various entities will work together to form an efficient and effective whole.

3.1 Contracting governments

SOLAS Chapters XI-1 and XI-2 discuss the roles of the contracting governments and their obligations in the overall scheme to enhance maritime security. A brief understanding of this will help the trainee to comprehend how and why their own governments have acted and how they may experience the port state control exercised by another government.

3.2 Recognized Security Organizations

Recognized Security Organizations are defined in SOLAS Chapter XI-2 Regulation 1 part 1.16 and discussed throughout Parts A and B of the ISPS Code. The trainee should understand how and when an RSO may take on the security related activities of a contracting government. This may be of particular importance to the Company Security Officer and the Port Facility Security Officer.

3.3 The company

The company is defined by SOLAS Chapter XI-1 and is given numerous obligations under Chapter XI-2 and the ISPS Code from Continuous Synopsis Records to the maintenance of the International Ship Security Certificate. Trainees would benefit greatly from a clear understanding of the role of the company and the support that they should expect from the company.

3.4 The ship

The term ship as used here means a ship to which Chapter XI of SOLAS applies. Various segments of Chapter XI and the ISPS Code discuss the persons, activities, plans, documentation and so forth that a ship will be exposed to in a security context. All trainees will need to understand these requirements as they relate to this important cornerstone of a maritime transportation system.

3.5 The port facility

The Port Facility is defined in SOLAS Chapter XI-2 Regulation 1 part 1.9 and is the location where a ship/port interface takes place. As such, numerous duties and activities are assigned to the Port Facility. All trainees should understand the role of the Port Facility in maintaining the security of a maritime transportation system.

3.6- 3.11 Ship Security Officer, Company Security Officer, Port Facility Security Officer, Shipboard personnel with specific security duties, Port facility personnel with specific security duties, and Other personnel

Trainees should understand the role of each of these various persons and know what to expect from each in terms of authority and responsibility. The ISPS Code Parts A and B clearly delineate the functions, duties, and training requirements for each of these categories of personnel. In the end these are the very people that will make the security plans work and will recognize areas for improvement. They will each need to appreciate their own role as well as that played by the others.

4 Ship Security Assessment

4.1 Risk assessment methodology

Ship security assessment is an essential and integral part of the process of developing and updating the ship security plan. In this segment of the course, it should be communicated to trainees that risk-based decision-making is one of the best tools to complete a security assessment and to determine appropriate security measures for a vessel. Risk based decision-making is a systematic and analytical process to consider the likelihood that a security breach will endanger an asset, individual, or function and to identify actions to reduce the vulnerability and mitigate the consequences of a security breach.

A security assessment is a process that identifies weaknesses in physical structures, personnel protection systems, processes, or other areas that may lead to a security breach, and may suggest options to eliminate or mitigate those weaknesses.

Detailed guidance concerning methodologies for risk-based security assessment are provided in the ISPS Code Part B and the USCG NVIC 10-02.

4.2 Assessment tools

Trainees in the Ship Security Officer course must be encouraged to adopt systematic and consistent approaches to the evaluation of security conditions and vulnerabilities. The focus of the Ship Security Officer in this regard will be more operational and less detailed than that of the Company Security Officer. The use of checklists to perform assessments of security in day-to-day operations should be discussed, noting the inclusion of categories such as the following:

- General layout of the ship.
- Location of areas that should have restricted access, such as the bridge, engine room, radio room, etc.
- Location and function of each actual or potential access point to the ship.
- Open deck arrangement including the height of the deck above water.
- Emergency and stand-by equipment available to maintain essential services.
- Numerical strength, reliability, and security duties of the ship's crew.
- Existing security and safety equipment for protecting the passengers and crew.
- Existing agreements with private security companies for providing ship and waterside security services.
- Existing protective measures and procedures in practice, including inspection, control and monitoring equipment, personnel identification documents and communication, alarm, lighting, access control and other appropriate systems.

4.3 On-scene security surveys

Trainees should be taught that the on-scene security survey is an integral part of any Ship Security Assessment. They should understand that the survey should fulfill the following functions:

- identification of existing security measures, procedures and operations;
- identification and evaluation of key shipboard operations that it is important to protect;
- identification of possible threats to the key shipboard operations and the likelihood of their occurrence, in order to establish and prioritize security measures; and
- identification of weaknesses, including human factors in the infrastructure, policies and procedures.

It should be emphasized to course participants that the on-scene survey should examine and evaluate existing shipboard protective measures, procedures and operations for:

- ensuring the performance of all ship security duties;
- monitoring restricted areas to ensure that only authorized persons have access;
- controlling access to the ship, including any identification systems;
- monitoring of deck areas and areas surrounding the ship;
- controlling the embarkation of persons and their effects (accompanied and unaccompanied baggage and the personal effects of ship's personnel);
- supervising the handling of cargo and the delivery of ship's stores; and
- ensuring that ship security communication, information, and equipment are readily available.

4.4 Security assessment documentation

Trainees should understand that the Ship Security Assessment shall be documented, reviewed, accepted and retained by the company. Upon completion of the Ship Security Assessment, a report shall be prepared, consisting of a summary of how the assessment was conducted, a description of each vulnerability found during the assessment and a description of counter measures that could be used to address each vulnerability. The report shall be protected from unauthorized access or disclosure.

5 Security Equipment

5.1 Security equipment and systems

Course participants should be aware of the types of security equipment and systems that are useful in enhancing maritime security, both ashore and afloat. Examples of such equipment include:

- Ship Security Alert System
- Locks
- Lighting
- Handheld radios

- GMDSS equipment
- Closed Circuit Televisions
- Automatic Intrusion Detection Device (Burglar Alarm)
- Metal detectors
- Explosive detectors
- Baggage screening equipment
- Container X-ray devices
- General alarm

Participants are not expected to acquire detailed technical or scientific knowledge concerning the theoretical underpinnings of the operation of security equipment. The objective is to ensure familiarity with the capabilities and appropriate deployment of such devices and systems. The Company Security Officer and the Port Facility Security Officer may well be in the position to influence the purchase and installation of security equipment. Instructors are encouraged to discuss this possibility as well as the resultant additional level of knowledge with trainees.

5.2 Operational limitations of security equipment and systems

The intent of this course segment is to communicate to trainees the functional limitations and operating constraints of security equipment that they may encounter or be called upon to use. Issues such as effective range, environmental sensitivities, and operator (human) error should be addressed as appropriate.

5.3 Testing, calibration and maintenance of security equipment and systems

Trainees should be familiar with methods for ensuring the continuing accuracy, efficiency, and operational readiness of selected items of security equipment and associated systems. For the Ship Security Officer, the focus should be on the tasks and procedures required to support such equipment while the vessel is at sea. Company Security Officer and Port Facility Security Officer trainees should understand the need for developing methods to ensure that the tasks and procedures required to support such equipment while the vessel is at sea are in place and are adhered to.

6 Ship Security Plan

6.1 Purpose of the Ship Security Plan

The Ship Security Plan is defined in the ISPS Code Part A Section 2.1 as a ship-specific plan that will ensure the application of measures on board the ship to provide protection from the risks of a security incident. Therefore it is imperative that all candidates for the Ship Security Officer and Company Security Officer positions fully understand the nature of the Ship Security Plan. The Ship Security Officer will need to maintain and supervise the implementation of the plan while the Company Security Officer will need to ensure that such a plan is developed, that it is submitted for approval, and thereafter that it is implemented and maintained. These are considerably different requirements and this course has addressed these differences in both content and time allotted for the subject.

6.2 Contents of the Ship Security Plan

The contents of the Ship Security Plan are most clearly established in the ISPS Code Part A section 9.4 with additional information provided in Section 9 of Part B of the Code. Trainees should be intimately familiar with the contents of the plan in a generic fashion thus knowing what to expect as they are assigned to various ships and experience various Ship Security Plans. It is suggested that a completed sample plan be provided by instructors to give trainees a better opportunity to understand the document to which they must be responsive aboard each ship to which they are assigned as Ship Security Officer.

6.3 Confidentiality issues

Essentially the Ship Security Plan is to be considered a confidential document and must be protected from unauthorized access or disclosure. Instructors should place notable emphasis on this and clearly delineate those few circumstances when and what sections of the Ship Security Plan may be inspected by Port State Control Officers.

6.4 Implementation of the Ship Security Plan

Implementation of the Ship Security Plan is a shared responsibility of the Company Security Officer and the Ship Security Officer with the Ship Security Officer being at the front line in this endeavor. Details concerning this shared responsibility should be presented in such as way as to not only ensure the understanding of the process but to also leave no doubt as to who is responsible for what. Both Ship Security Officer and Company Security Officer must be clear on their roles in the implementation of the plan.

6.5 Maintenance and modification of the Ship Security Plan

As written, the Ship Security Plan is intended to address security measures for each of the three security levels but on further inspection it can be seen that the Ship Security Plan is a living document and will require modification over time. Trainees must understand not only the provisions set out by the Ship Security Plan but also their role in maintaining its effectiveness and contributing to positive modifications of the plan over time. Instructors should consider creating an exercise or a sample scenario showing the proper method of maintenance, realization of the need for modification, the proper route to follow for suggesting modifications, and the approval necessary before a modification or amendment can be set in place as new policy.

7 Threat Identification, Recognition, and Response

7.1 Recognition and detection of weapons, dangerous substances and devices

The focus of this session is on the characteristics and potential effects of prohibited weapons; explosives; chemical, biological, and radiological devices; substances and compounds that pose a hazard to personnel and/or ships and facilities, and related topics.

7.2 Methods of physical searches and non-intrusive inspections

In this segment of the course, trainees will learn techniques used to conduct physical and non-intrusive searches of persons, personal effects, baggage, cargo, and ship's stores. Trainees

should be informed that, unless there are clear security grounds for doing so, members of the ship's crew should not be required to search their colleagues or their personal effects. It should be conveyed that any such search shall be undertaken in a manner that fully takes into account the human rights of the individual and preserves his or her basic human dignity.

7.3 Implementing and coordinating searches

Course participants should be familiar with the basic items of equipment that may be employed in conducting searches. Examples of this equipment include:

- flashlights and batteries;
- screwdrivers, wrenches and crowbars;
- mirrors and probes;
- gloves, hard hats, overalls and non-slip footwear;
- plastic bags and envelopes for collection of evidence;
- forms on which to record activities and discoveries.

Trainees should learn procedures to be followed so as to ensure effective and efficient searches. Examples of these include the following:

- Crew members and facility personnel should not be allowed to search their own areas in recognition of the possibility that they may have concealed packages or devices in their own work or personal areas
- The search should be conducted according to a specific plan or schedule and must be carefully controlled.
- Special consideration should be given to search parties working in pairs with one searching "high" and one searching "low". If a suspicious object is found, one of the pair can remain on guard while the other reports the find.
- Searchers should be able to recognize suspicious items.
- There should be a system for marking or recording "clean" areas
- Searchers should maintain contact with the search controllers, perhaps by UHF / VHF radio.
- Searchers should have clear guidance on what to do if a suspect package, device, or situation is found.
- Searchers should bear in mind that weapons and other dangerous devices may be intentionally placed to match its context as a means of disguise, such as a toolbox in an engine room.

Participants in the course should be acquainted with the fact that there are many places on board a ship where weapons, dangerous substances, and devices can be concealed. Some of these are:

Cabins

- Back sides and underneath drawers
- Between bottom drawer and deck
- Beneath bunks, e.g. taped to bunk frame under mattress

- Under wash basin
- Behind removable medicine chest
- Inside radios, recorders etc
- Ventilator ducts
- Inside heater units
- Above or behind light fixtures
- Above ceiling and wall panels
- Cutouts behind bulkheads, pictures, etc.
- False bottom clothes closets-hanging clothes
- Inside wooden clothes hangers
- Inside rolled socks, spare socks
- Hollowed-out molding

Companionways

- Ducts
- Wire harnesses
- Railings
- Fire extinguishers
- Fire hoses and compartments
- Access panels in floors, walls, ceilings
- Behind or inside water coolers, igloos

Toilet and Showers

- Behind and under washbasins
- Behind toilets
- In ventilation ducts and heaters
- Toilet tissue rollers, towel dispensers, supply lockers
- Taped to shower curtains, exposed piping, and light fixtures
- Access panels in floors, walls, ceiling

Deck

- Ledges on deck housing, electrical switch rooms, winch control panels
- Lifeboat storage compartments, under coiled rope, in deck storage rooms
- Paint cans, cargo holds, battery rooms, chain lockers.

Engine room

- Under deck plates
- Cofferdams, machinery pedestals, bilges

- Journal-bearing shrouds and sumps on propeller shaft
- Under catwalk, in bilges, in shaft alley
- Escape ladders and ascending area.
- In ventilation ducts, attached to piping or in tanks with false gauges.
- Equipment boxes, emergency steering rooms, storage spaces.

Galleys and Stewards' Stores

- Flour bins and dry stores
- Vegetable sacks, canned foods (re-glued labels)
- Under or behind standard refrigerators
- Inside fish or sides of beef in freezers
- Bonded store lockers, slop chest, storage rooms.

7.4 Recognition, on a non-discriminatory basis, of persons posing potential security risks

Instructors should explain suspicious patterns of behavior, while emphasizing the importance of avoiding racial profiling and ethnic stereotyping. Examples of suspicious behaviors include:

- Unknown persons photographing vessels or facilities.
- Unknown persons attempting to gain access to vessels or facilities.
- Suspicious individuals establishing businesses or roadside food stands either adjacent or in proximity to facilities.
- Unknown persons loitering in the vicinity of ships or port facilities for extended periods of time.
- Unknown persons telephoning facilities to ascertain security, personnel, or standard operating procedures.
- Vehicles with personnel in them loitering and perhaps taking photographs or creating diagrams of vessels or facilities.
- Small boats with personnel on board loitering and perhaps taking photographs or creating diagrams of vessels or facilities.
- Suspicious general aviation aircraft operating in proximity to vessels or facilities.
- Suspicious persons who may be carrying bombs or participating in suicide squad activities.
- Unknown persons attempting to gain information about vessels or facilities by walking up to personnel or their families and engaging them in a conversation.
- Suspicious vendors attempting to sell merchandise.
- Unknown or suspicious workmen trying to gain access to facilities to repair, replace, service, or install equipment.
- Suspicious emails on Internet, public affairs attempting to obtain information regarding the facility, personnel, or standard operating procedures.

- Suspicious package drop-offs/attempted drop-offs.
- Anti-national sentiments being expressed by employees or vendors.
- Anti-national pamphlets or flyers distributed to employees or placed on windshields in parking lots.
- Repeated or suspicious out-of-ordinary phone calls.
- Recreational boaters posing as mariners in distress to attract assistance from other vessels.

7.5 Techniques used to circumvent security measures

Trainees should be cautioned that no security equipment or measure is infallible. They should be apprised of the known techniques that can be employed to evade security systems and controls, such as the disabling of alarm systems, picking of locks, jamming of radio signals, etc.

7.6 Crowd management and control techniques

Course participants should be familiarized with the basic patterns of behavior of people in groups during time of crisis. The critical importance of clear communication with vessel personnel, port facility personnel, passengers, and others involved should be underscored.

8 Ship Security Actions

In general, the "ship security actions" section of this course is material that both the Ship Security Officer and the Company Security Officer should be very familiar with. The Port Facility Security Officer will need a slightly different level of understanding and the model course for Port Facility Security Officer varies in that respect. Parts A and B of the ISPS Code are helpful in organizing material to be conveyed in this section of the course. Instructors should indicate that this section of the course is where ideas, plans, and preparation turn into actions and procedures.

8.1 Actions required by different security levels

The instructor should convey the different types of security measures that should be considered for ships at sea and those in port as they respond to security incidents and the various security levels that may be set. Feedback from or discussion among the trainees will help in deciding whether or not the necessary knowledge is being conveyed. Trainees may benefit from an in-class creation of a checklist detailing the appropriate generic actions given various conditions.

8.2 Maintaining security of the ship/port interface

The ship/port interface is defined in SOLAS Chapter XI-2 Regulation 1. It is this interface that determines that a port facility exists and therefore determines the need for a Port Facility Security Plan and the interaction with the Ship Security Plan. The setting of security levels by the port or by the ship, with liaison services provided by the Company Security Officer, will allow the Port Facility Security Officer and the Ship Security Officer to understand their duties and constraints. Instructors should ensure that trainees are clear on the critical importance of the interaction between the shipboard security plan and that of the port facility.

8.3 Usage of the Declaration of Security

The Declaration of Security is defined in Regulation 1 of SOLAS Chapter XI-1. The ISPS Code further describes the function of the Declaration of Security, when it should be completed, who may initiate it, and who is required to sign it. There is a sample Declaration of Security in Appendix 1 of Part B of the ISPS Code, which may be helpful in explaining the nature and use of the Declaration of Security.

8.4 Implementation of security procedures

Building on the understanding gained from previous sections in this course, trainees should be ready to synthesize the requirements and plans into actual procedures such as security inspections, controlling access to the ship, monitoring deck areas and areas surrounding the ship, and so forth.

9 Emergency Preparedness, Drills, and Exercises

9.1 Contingency planning

This portion of the course is concerned with incident response planning for a variety of contingencies associated with terrorism and other criminal activities that may arise in the maritime setting. Appropriate action to be taken in the case of bomb threats, explosions, piracy, hijackings, and similar events should be discussed.

9.2 Security drills and exercises

It should be conveyed to course participants that the objective of drills and exercises is to ensure that shipboard personnel are proficient in all assigned security duties at all security levels and in the identification of any security related deficiencies, which need to be addressed.

Trainees should learn that the effective implementation of the provisions of the ship security plan requires that drills be conducted at least once every three months. In addition, in cases where more than 25 percent of the ship's personnel have been changed, at any one time, with personnel that have not previously participated in any drill on that ship within the last 3 months, a drill should be conducted within one week of the change. These drills should test individual elements of the plan such as:

- damage to, or destruction of, the ship or of a port facility, e.g. by explosive devices, arson, sabotage or vandalism;
- hijacking or seizure of the ship or of persons on board;
- tampering with cargo, essential ship equipment or systems or ship's stores;
- unauthorized access or use, including presence of stowaways;
- smuggling weapons or equipment, including weapons of mass destruction;
- use of the ship to carry those intending to cause a security incident and/or their equipment;
- use of the ship itself as a weapon or as a means to cause damage or destruction;
- attacks from seaward while at berth or at anchor; and

- attacks while at sea.

Various types of exercises that may include participation of Company Security Officers, Port Facility Security Officers, relevant authorities of Contracting Governments as well as Ship Security Officers, if available, should be carried out at least once each calendar year with no more than 18 months between the exercises. These exercises should test communications, coordination, resource availability, and response. These exercises may be:

- full scale or live;
- tabletop simulation or seminar; or
- combined with other exercises held such as search and rescue or emergency response exercises.

9.3 Assessment of security drills and exercises

At the end of each drill or exercise, the Ship Security Officer shall review the drill or exercise, and ensure that any mistakes made or deficiencies identified are corrected. All personnel involved shall give their comments on the effectiveness of the drill to the Ship Security Officer.

10 Security Administration

10.1 Documentation and records

Drawing on Chapter XI-1 Regulation 5 and Chapter XI-2 of SOLAS the instructor will find sufficient references to, and examples of, required documents as well as requirements for record keeping. The International Ship Security Certificate should be the main emphasis here; the Continuous Synopsis Record warrants coverage as well. Records of activities addressed in the Ship Security Plan must be kept on board for certain time periods that are determined by administrations. Section 10 of the ISPS Code Part A is very useful on the subject of records.

10.2 Reporting security incidents

Trainees will appreciate that all security incidents must be reported in accordance with specific reporting requirements. It may be helpful to for instructors to provide several sample security incidents and have the class or individuals explain how they would go about reporting these incidents.

10.3 Monitoring and control

Here the focus of monitoring is on the Ship Security Plan itself. Proper administration of the plan requires that the Master and the Ship Security Officer review the Ship Security Plan and measure its effectiveness and relevance over time.

10.4 Security audits and inspections

In a fashion similar to the ISM Code the IMO requires that audits and inspections be conducted to formally assess the effectiveness of the Ship Security Plan in all respects. The ISPS Code provides sufficient material for instruction in this area.

10.5 Reporting nonconformities

The audit, inspection, and periodic review process required by the ISPS Code naturally calls for a means of identifying, communicating, and rectifying non-conformities. Both the Ship Security Officer and the Company Security Officer play key roles in this effort to keep the Ship Security Plan in an optimum condition.

11 Security Training

11.1 Training requirements

The training requirements set out under the ISPS Code can be found in Parts A and B of the Code and should be explained briefly to the trainees. Instructors should clarify, in this brief amount of time, the requirements for who needs to be trained, what the training consists of, and where the responsibility lies for the training of various persons involved in maritime security.

Part E: Evaluation

Introduction

The effectiveness of any evaluation depends on the accuracy of the description of what is to be measured.

The learning objectives that are used in the detailed teaching syllabus will provide a sound base for the construction of suitable tests for evaluating trainee progress.

Method of evaluation

The methods chosen to carry out an evaluation will depend upon what the trainee is expected to achieve in terms of knowing, comprehending and applying the course content.

The methods used can range from a simple question-and-answer discussion with the trainees (either individually or as a group) to prepared tests requiring the selection of correct or best responses from given alternatives, the correct matching of given items, the supply of short answers or the supply of more extensive written responses to prepared questions.

Where the course content is aimed at the acquisition of practical skills, the test would involve a practical demonstration by the trainee making use of appropriate equipment, tools, etc.
The responses demanded may therefore consist of:

- the recall of facts or information, by viva-voce or objective tests
- the practical demonstration of an attained skill
- the oral or written description of procedures or activities
- the identification and use of data from sketches, drawings, maps, charts, etc.
- carrying out calculations to solve numerical problems
- the writing of an essay or report.

Validity

The evaluation must be based on clearly defined objectives, and it must truly represent what is to be measured. There must be a reasonable balance between the subject topics involved and also in the testing of trainees' KNOWLEDGE, COMPREHENSION and APPLICATION of concepts.

The time allocated for the trainee to provide a response is very important. Each question or task must be properly tested and validated before it is used to ensure that the test will provide a fair and valid evaluation.

Reliability

To be reliable, an evaluation procedure should produce reasonably consistent results no matter which set of papers or version of the test is used.

Subjective testing

Traditional methods of evaluation require the trainee to demonstrate what has been learned by stating or writing formal answers to questions.

Such evaluation is subjective in that it invariably depends upon the judgement of the evaluator. Different evaluators can produce quite different scores when marking the same paper or evaluating oral answers.

Objective testing

A variety of objective tests have been developed over the years. Their common feature is that the evaluation does not require a judgement by the evaluator. The response is either right or wrong.

One type of objective test involves supplying an answer, generally a single word, to complete the missing portion of a sentence. Another involves supplying a short answer of two or three words to a question. Such tests are known as 'completion tests' and 'short answer tests'.

Another form of objective testing consists of 'selective response tests' in which the correct, or best, response must be selected from given alternatives. Such tests may consist of 'matching tests', in which items contained in two separate lists must be matched, or they may be of the true/false type or of the multiple-choice type.

The most flexible form of objective test is the multiple-choice test, which presents the trainee with a problem and a list of alternative solutions, from which he must select the most appropriate.

Distracters

The incorrect alternatives in multiple-choice questions are called 'distracters', because their purpose is to distract the uninformed trainee from the correct response. The distracter must be realistic and should be based on misconceptions commonly held, or on mistakes commonly made.

The options "none of the above" or "all of the above" are used in some tests. These can be helpful, but should be used sparingly.

Distracters should distract the uninformed, but they should not take the form of 'trick' questions that could mislead the knowledgeable trainee (for example, do not insert "not" into a correct response to make it a distracter).

Guess factor

The 'guess factor' with four alternative responses in a multiple-choice test would be 25%. The pass mark chosen for all selective-response questions should take this into account.

Scoring

In simple scoring of objective tests one mark may be allotted to each correct response and zero for a wrong or nil response.

A more sophisticated scoring technique entails awarding one mark for a correct response, zero for a nil response and minus one for an incorrect response. Where a multiple-choice test involves four alternatives, this means that a totally uninformed guess involves a 25% chance of gaining one mark and a 75% chance of losing one mark.

Scores can be weighted to reflect the relative importance of questions, or of sections of an evaluation.

Information Requested of Instructors Who Implement IMO Model Courses

Introduction

1 IMO model courses are periodically revised to take into account the changes which have taken place in relevant Conventions, resolutions and other matters affecting each course. To help IMO to improve the content of courses when they are revised, the assistance of all instructors who implement or participate in implementing courses is requested, whether the implementation is part of an IMO technical co-operation project or part of a Maritime Training Academy's regular programme.

Information requested and its format

2 To simplify their consolidation by IMO, the technical comments and suggestions for the improvement of model courses should follow the format that is outlined below. If no comments or suggestions are to be provided under a topic, please insert "no comment" against the item.

3 Please identify:

.1 the course number and title;
.2 the date and location of its implementation;
.3 the approximate number of IMO model courses you have implemented to date; and
.4 the approximate number of times you have implemented this particular model course.

4 In commenting on **Part A – Course Framework**, please comment on the items ('Scope', 'Objectives', etc.) in the order in which they appear in the course; in all cases, please indicate:

.1 the number of participants who met the entry standards and the number who did not;
.2 the course intake and, if the recommendations in 'Course intake limitations' were exceeded, the reasons for this and your observations on the effect of this on the quality of the course;
.3 if the conditions under 'Staff requirements' were met; if not, please indicate the nature of the deficiency and give your observations of the effect of this on the quality of presentation of the course; and
.4 any lack of equipment or facilities as compared with the recommendations under 'Teaching facilities and equipment' and your observations of the effect of this lack on the quality of presentation of the course.

5 In commenting on **Part B – Course Outline**, please bear in mind that minor variations in time allocations are inevitable. Major difficulties with allocations of time and any omissions or redundancies of subject areas should be briefly explained.

6 In commenting on **Part C – Detailed Teaching Syllabus**, please identify the specific learning objectives concerned by their paragraph numbers.

7 In commenting on **Part D – Instructor's Manual**, please clearly identify the section concerned. If the bibliography or the practical exercises are found to be unsatisfactory, please

identify suitable alternative texts, as far as is possible, or outline alternative exercises, as appropriate.

8 Any further comments or suggestions you may have which fall outside the scope of the items listed above may be added at the end. In particular, your views on the usefulness of the course material to you in implementing the course would be appreciated, as would the contribution to IMO of any additional teaching material you found useful in implementing it.

Please address your comments to:

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